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Description of a new subgenus of *Phymatodes* Mulsant, 1839 from China (Coleoptera, Cerambycidae, Cerambycinae, Callidiini)

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Key words: Helotidae, longhorn beetles, taxonomy, *Neohelota*, new species, new subgenus, Oriental region.
Abstract. A new subgenus *Helotaodes* **subgen. nov.** is established within *Phymatodes* Mulsant, 1839 to accommodate *Phymatodes* (*Helotaodes*) *xiaobini* **sp. nov**., a unique mimetic species from Yunnan, China that resembles beetles of the family Helotidae. Illustrations of habitus of both sexes, and major diagnostic features are provided.

Introduction

The first author recently received a series of specimens of a peculiar cerambycine species from Yunnan, China, exhibiting Helotine mimicry. Superficially resembling *Callidium* Fabricius or *Phymatodes* Mulsant (tribe Callidiini Kirby), this unknown species was examined in detail and determined to belong to the latter genus. However, it can be clearly distinguished from all currently known subgenera of *Phymatodes* by a combination of diagnostic characters: the dorsum with metallic luster, the pronotal disk coarsely punctate and medially carinate, and the tufted elytra lacking translucent bands. Therefore, we propose a new subgenus to accommodate this new species, which is described herein. This species represents the 16th known species of *Phymatodes* in China (Tavakilian & Chevillotte, 2025). Tribal classification within the subfamily Cerambycinae follows Gressitt (1951), Gressitt & Rondon (1970), and Ohbayashi & Niisato (2007).

Material and methods

The holotype of the new species is deposited in the Shanghai Entomological Museum, Chinese Academy of Science, Shanghai, China (SHEM). The paratypes belongs to the Collection of Wen-Xuan Bi, Shanghai, China (CBWX).

All images were taken using a Canon EOS 80D camera equipped with a Canon MP-E 65 mm f/2.8 1-5X Macro Lens. A Canon MT-24EX Macro Twin Lite Flash was used as light source. CombineZM was used for image stacking. The images were edited and grouped in Adobe Photoshop 2023.

Results

Phymatodes (*Helotaodes*) subgen. nov.

Type species. *Phymatodes* (*Helotaodes*) *xiaobini* **sp. nov.**

Description. Body small sized (7.1-8.8 mm long), flattened; dorsum with metallic luster. Head short. Frons transverse, moderately concave. Genae very short. Eye finely facetted, strongly emarginate; moderately large and prominent. Antennae shorter than body length; scape, antennomeres III and IV subequal in length; antennomeres VI-X serrate externally. Pronotum transverse, obtusely angulate laterally near midlength, basal margin narrower than apical margin; disk gently convex, coarsely punctate, provided with three small calli arranged as inverted triangle, and with a narrow glabrous carina across the midline. Prosternum with procoxal cavities broadly open posteriorly; prosternal process short and narrow. Mesoscutum with stridulatory plate well developed. Mesocoxal cavities open to mesepimera. Elytra entire; disk coarsely punctate, bearing a small tuft of moderately long hairs behind the scutellum; each elytron provided with two yellowish pubescent spots, without translucent bands. Legs with femora strongly clavate; procoxae prominent, subrounded, angulate externally; hind tarsi with first tarsomere subequal to the following two tarsomeres combined.

Distribution. China.

Remarks. This new subgenus can be readily separated from the

genus *Callidium* Fabricius (*sensu* Holzschuh, 1993) by the stridulatory plate of mesoscutum well developed, and the elytra tufted with long hairs behind the scutellum. It is mostly similar to the subgenus *Phymatodes* (*Poecilium*) Fairmaire by the presence of the tuft hairs near elytral base. But it can be distinguished from the latter by the pronotal disk coarsely punctate and medially carinate; the elytral disk coarsely punctate throughout, without translucent bands, instead with light-colored spots; and the body dorsum with metallic luster.

Etymology. From the combination of the stem of the family name Helotidae (Coleoptera), and Greek *-ṓdēs* meaning like, which refers to the superficial similarities between the type species of this new subgenus and Helotidae species, especially those of *Neohelota* Ohta (Figs 1-3). The gender is masculine.

***Phymatodes* (*Helotaodes*) *xiaobini* sp. nov.**

Figs 1, 2, 4

Type locality. China, Yunnan, Weixi, A'hualuohe, 2400-2600 m.

Description. Male (Fig. 1). Length from tip of mandibles to elytral apices 7.1-8.0 mm, width at elytral humeri 2.3-2.6 mm. Body dorsum shiny, mostly brown to dark brown with dark green to purple metallic luster (more distinct under daylight conditions). Scutellum covered with yellowish pubescence. Elytra at most slightly lighter on basal two-fifth; each elytron conspicuously with two small translucent spots covered with dense yellowish pubescence, the spots situated near basal two-fifths and at apical fourth respectively, of which the posterior smaller one is comparatively closer to the lateral margin; with dense appressed dark brown pubescence surrounding the former two spots, or arranged along apical margin. Antennae with scape, apical half of antennomeres VII-VIII, and most of antennomeres IX-XI dark brown; remaining portion light brown. Legs mostly dark brown, except coxae, trochanters, and middle third of the clavate portion of femora brown to light brown. Ventral surface mostly light brown, except for the abdominal ventrites slightly darker.

Head slightly narrower than pronotal anterior margin,

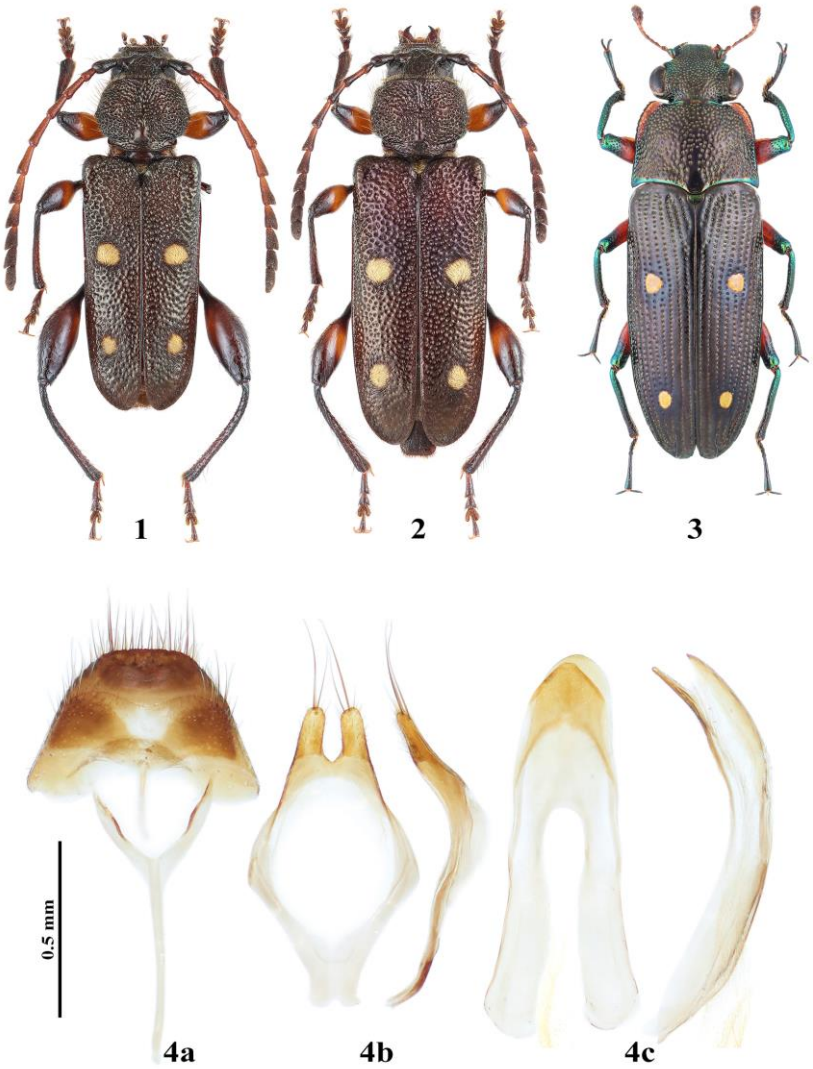
moderately concave between antennal tubercles; frons transverse, provided with a longitudinal median groove, hardly reaching vertex; frons and vertex sparsely, deeply and finely punctate, bearing sparse long setae. Eyes with upper and lower eye lobes connected by one row of ommatidia; lower eye lobe ca. 1.3 times as long as wide, 2.5 times as long as gena. Antennae 0.6-0.7 times as long as body; scape moderately clavate, bearing sparse long setae; antennomeres VI-XI flattened, VI-X serrate externally. Antennomere V longest, 1.2 times as long as scape, antennomere III, or IV; antennomeres V-VIII gradually shorter; VIII–XI subequal in length.

Pronotum ca. 1.3 times as long as width across lateral tubercles, subequal to basal width; base strongly constricted, distinctly margined and undulate; disk with punctures much denser and coarser than head, and provided with sparse long setae mainly at lateral sides. Scutellum subtriangular.

Elytra ca. 2.1 times as long as humeral width, 3.4 times as long as pronotum; very gently convergent from humeri toward separately rounded apices; humeri rounded, slightly protruding laterally; disk with punctures similar to pronotum, gradually becoming shallower posteriorly. Ventral surface sparsely and finely punctate. Legs moderately long; metafemora hardly exceeding elytral apices; apical and external surfaces of femora and entire surfaces of tibiae covered with sparse long setae.

Male terminalia. Tergite VIII (Fig. 4a) roughly trapezoidal with anterior margin bearing moderately dense long setae. Tegmen (Fig. 4b) in lateral view distinctly curved near apical two-fifths, broadly rhombic in shape and widest near basal two-fifths in ventral view; lateral lobes moderately long and thick, less than one-fifth of total length of tegmen, provided with short fine setae mainly on ventral surfaces, and bearing two or three very long setae on each apex. Median lobe (Fig. 4c) stout, distinctly longer than tegmen, distinctly curved in lateral view; apex subacute.

Female (Fig. 2). Length from tip of mandibles to elytral apices 7.3-8.8 mm, width at elytral humeri 2.5-2.9 mm. Almost identical to male in general appearance, except for the elytra longer in relation to the pronotal length, subparallel sided on basal half, the appendages shorter, the femora relatively slender, and the abdominal ventrite V much darker.



Figs 1-3. Habitus of species: 1-2. *Phymatodes* (*Helotaodes*) *xiaobini* **sp. nov.** from Yunnan, China (1, Holotype, male; 2, paratype, female); 3. *Neohelota* sp. (Helotidae) from Fujian, China.

Fig. 4. Male terminalia of *Phymatodes* (*Helotaodes*) *xiaobini* **sp. nov.**: a. tergite VIII with sternites VIII and IX in ventral view; b. tegmen in ventral view and lateral view; c. median lobe in ventral view and lateral view.

Type material. Holotype, male "CHINA. Yunnan, Weixi / A'hualuohe / 2,400-2,600 m, 2025.VI / leg. Bai-Jun Li" (SHEM); 9 Paratypes; 4 males, 5 females, same data as holotype (CBWX).
Distribution. China: Yunnan.
Etymology. The new species is dedicated to our friend Mr. Xiao-Bin Song, who kindly provided the type material.

Acknowledgements. We wish to express our thanks to Xiao-Bin Song (Shanghai, China) for providing the type material of this study, and to Mikhail Danilevsky (A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow, Russia) for his timely communication.

REFERENCES

Gressitt J.L. 1951. Longicorn beetles of China. In: Lepesme, P. (Ed.). Longicornia, études et notes sur les longicornes, Volume 2. Paris: Paul Lechevalier 667 pp., 22 pls.

Gressitt J.L. & Rondon J.A. 1970. Cerambycids of Laos (Disteniidae, Prioninae, Philiinae, Aseminae, Lepturinae, Cerambycinae). Pacific Insects Monographies 24: 1-314.

Holzschuh C. 1993. Neue Bockkäfer aus Europa und Asien IV, 60 neue Bockkäfer aus Asien, vorwiegend aus China und Thailand (Coleoptera: Cerambycidae). - Schriftenreihe der Forstlichen Bundesversuchanstalt (FBVA-Berichte). 75: 1-63.

Mulsant E. 1839. Histoire naturelle des coléoptères de France. Longicornes. Maison Libraire, Paris; Imprimerie de Dumoulin, Ronet et Sibuet, Lyon 304 pp., 3 pls.

Ohbayashi,N. & Niisato T. 2007. Longicorn Beetles of Japan. Tokai University Press, Kanagawa pp. v-xii + 1-818.

Tavakilian G.L, & Chevillotte H. 2025. Titan: base de données internationales sur les Cerambycidae ou Longicornes. Version 4.0. http://titan.gbif.fr/index.html [accessed 1 November 2025]

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Several nomenclatural notes on Palaearctic Cerambycidae (Coleoptera)

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Key words: Coleoptera, Cerambycidae, taxonomy, ICZN, new synonym, restored name.
Abstract. Several new synonyms are proposed. A long-proposed unacceptable synonymy has been wrongly proposed again as a new one. The composition of one subgenus has been expanded. The correct spelling of one species name and one subgeneric name have been restored. One name is recognized as a type species name of the genus.

Introduction

Cerambycidae is one of the most studied families of beetles, but its taxonomic nomenclature continues to be updated annually. Several taxonomy modifications and remarks are proposed below. One old species name is accepted as available and valid.

Results

1. The type species of *Pachyta* Dejean is *Leptura octomaculata* Schaller, 1783 [as "*L. octomaculata* Fabricius, 1792"] (= *L. cerambyciformis* Schrank, 1781), by subsequent designation in Westwood (1838: 41). *L. cerambyciformis* Schrank, 1781 is currently included in *Pachytodes* Pic, 1891. So, *Pachyta* Dejean, 1821 becomes the correct name for *Pachytodes* Pic, 1891 (*Pachyta* Dejean, 1821 = *Pachytodes* Pic, 1891), and the species previously placed in *Pachyta* would be included in *Argaleus* LeConte, 1850. This would lead to a great instability since both *Pachyta* and *Pachytodes* have been used a lot in the literature. A Case could/should be submitted to the ICZN to conserve the usage

of *Pachyta* and *Pachytodes* by requesting the suppression of the type species designation by Westwood (1838) and adoption of *Leptura quadrimaculata* Linnaeus, 1758 as type species of *Pachyta* Dejean, 1821, proposed by Thomson (1864), which has been accepted in the literature. The new name *Prorhagium* Krajčik, 2025b (type species *Cerambyx lamed* Linnaeus 1758) is superfluous. New synonym must be established: *Pachyta* Dejean, 1891 = *Prorhagium* Krajčik, 2025b, **syn. nov.**

I am very grateful to Dr. Serge Laplante for consultations.

2. According to Plavilstshikov's (1934: 169) note on *Rhopalopus*: "*Rh. heteromorphus* Jank. 1932 = *nadari* Pic, 1894". I was unable to detected a publication by Jankowski (1932). Most probably it was not ever appeared. So, the name "*heteromorphus*" was firstly published by Jankowski (1934: 95) as a probable synonym of *Rh. nadari* Pic, 1894: "Остается, поэтому, провизорно определить нашего усача, как *R. nadari* со знаком вопроса, … " (It remains apparently identified our longhorn-beetle as *R. nadari* with a question mark). Each such identification of the species inside its detail description by Jankowski (1932: 96, 98) was accompanied with question mark: "*Rhopalopus nadari* Pic (?)" or "*R. nadari* (?)". So, the name *Rhopalopus heteromorphus* Jankowski, 1934 was not definitely accepted by its author as a synonym, and it does not meet the conditions of the Art. 11.6. (ICZN 1999) - *Ropalopus heteromorphus* (Jankowski, 1934) is a valid name of a species distributed in Kirgizstan, Uzbekistan and Kazakhstan. The species was described once more as *Ropalopus mali* Holzschuh, 1993; *Ropalopus heteromorphus* (Jankowski, 1934) = *Ropalopus mali* Holzschuh, 1993, **syn. nov.**

I am very grateful to Dr. Boris Korotyaev for consultations.

3. *Leioderus* Redtenbacher, 1845: 110 was described together with a single species *L. testaceus* Redtenbacher, 1845:153 [footnote] (Art. 13.4. Combined description of new genus-group taxon and new species). So, *L. testaceus* Redtenbacher, 1845 (= *Leioderes kollari* Redtenbacher, 1849) is a type species of *Leioderus* Redtenbacher, 1845, see Danilevsky (1988: 215).

Sama (2000) agreed that *Leioderus* L. Redtenbacher, 1845:

110 was actually described alongside the species *Leioderus testaceus* Redtenbacher, 1845: 153 (mentioned in a footnote). However, for dubious reasons, he considered it inappropriate to treat both of these names as valid and regarded *Leioderus testaceus* Redtenbacher, 1845 as unavailable.

Sama (2000) cites ICZN 12.2.5, arguing that a new generic name must necessarily include at least one available specific name; however, Articles 67.2.2 and 69.3 of the Code clearly contradict this.

4. According to Karpinski et al. (2025: 7): Lamiini Latreille, 1825 = Dorcadionini Swainson, 1840, "syn. nov". The unacceptable synonyms were already published long ago by Sama (2008: 233).

5. *Dorcadion rufogenuum* Reitter, 1895 is used to be published with a wrong spelling - "*rufogenum*": Pic (1909: 99), Plavilstshikov (1932: 192; 1958: 278), Breuning (1946: 129; 1962: 432; 1966: 751), Lobanov et al. (1982: 263), Danilevsky (1993: 48; 2002: 2; 2010: 252; 2020: 443; 2023: 170), Hua (2002: 205; 2024: 680), Danilevsky & al. (2005: 137), Hua et al. (2009: 454), Toropov, Milko (2013: 12) and others.

A correct spelling "*rufogenuum*" was published by Gressitt (1951: 335), Lin & Tavakilian (2019).

6. *Eodorcadion* (*Arenodorcadion* Karpiński, 2025: 9) was proposed with type species: *Neodorcadion egregium* Reitter, 1897 for a single species *E.* (*Ar.*) *egregium* (Reitter, 1897).

Besides one more species must be included in *E.* (*Arenodorcadion*): *E.* (*Ar.*) *brandti* (Gebler, 1841b). It is so close to *E.* (*Ar.*) *egregium*, that transitional specimens are known in China from the environs of Ulungur lake. So, *E.* (*Ar.*) *egregium* (Reitter, 1897) could be regarded as a subspecies of *E.* (*Ar.*) *brandti* (Gebler, 1841).

7. The taxonomy position of *Phytoecia malachitica* Lucas, 1847 rests unadequate. Traditionally the species was regarded as a member of the nominative subgenus as *Ph.* (s. str.) *malachitica* Lucas, 1847 (Breuning, 1951: 362; 1966: 751; Löbl & Smetana, 2010: 307; Danilevsky, 2020: 443), or as *Ph.* (*Opsilia*) *malachitica* Lucas, 1847 (Reitter, 1911: 270; Villiers, 1946: 140), or as *Opsilia malachitica*

(Lucas, 1847) (Vives, 2000: 488; Jeremías & Pérez De Gregorio, 2024: 191). At last it was included in a new artificial subgenus *Ph.* (*Metallicophytoecia* Özdikmen, 2025: 1819) - type species *Leptura caerulea* Scopoli, 1772, despite the fact that *Phytoecia malachitica* has nothing in common with *Ph. caerulea* (Scopoli, 1772). The last position was supported by Lazarev (2025).

In fact *Ph. malachitica* is quite unique and characterises by exceptional set of characters: undivided eyes, unicuspid mandibulae, black elytra densely covered with strongly shining green or bluish scales, male pygidium without emargination. The species deserves its own subgenus *Ph.* (*Hoplotoma* Perez Arcas, 1874: 151, **nom. rest.**) type species *Phytoecia malachitica* P. H. Lucas, 1847.

REFERENCES

Breuning S. 1951. Revision du genre Phytoecia Muls. (Col. Cerambycidae). - Entomologische Arbeiten aus dem Museum G. Frey. 2: 1-103, 353-460.

Breuning S. 1958. 1. Lieferung, S. 1-48. - In: S.Breuning, 1958-1969. Catalogue des Lamiaires du Monde (Col. Céramb.). Tutzing bei München, Verlag des Museums G. Frey: 1069 pp.

Breuning S. 1962. Revision der Dorcadionini (Coleoptera, Cerambycidae). - Entomologische Abhandlungen und Berichte aus dem Staatlichen Museum für Tierkunde in Dresden. 27: 1-665.

Breuning S. 1966. 9. Lieferung, S. 659-765. - In: S.Breuning, 1958-1969. Catalogue des Lamiaires du Monde (Col. Céramb.). Tutzing bei München, Verlag des Museums G. Frey: 1069 pp.

Danilevsky M.L. 1988. Subfamily Cerambycinae Latreille, 1804, pp. 129-284. - In: Svacha P., Danilevsky M.L. Cerambycoid larvae of Europe and Soviet Union (Coleoptera, Cerambycoidea). Part II. Acta Universitatis Carolinae. 31 (1987) (3-4): 284 pp.

Danilevsky M.L. 1993. Some preliminary results of the type-material study of the Cerambycidae (Coleoptera) collection of the National Museum of Natural History, Paris. - Russian Entomological Journal. 2: 47-50. [in Russian]

Danilevsky M.L. 2002. Subspecific structure of Dorcadion (Dzhungarodorcadion) semenovi Ganglbauer, 1884 (Coleoptera, Cerambycidae). - Les Cahiers Magellanes. 10 (2001): 1-18.

Danilevsky M.L. 2010. tribe Dorcadionini, pp. 241-264. - In: I. Löbl & A. Smetana (ed.): Catalogue of Palaearctic Coleoptera, Vol. 6. Stenstrup: Apollo Books, 924 pp.

Danilevsky M.L. 2020. taxa from West Europe, and North Africa to countries of former Soviet Union, and Mongolia. - In: Danilevsky M. L. (ed.). Catalogue of Palaearctic Coleoptera, vol. 6 (1), Chrysomeloidea I (Vesperidae, Disteniidae, Cerambycidae). Revised and updated edition. Leiden / Boston: Brill, i-xxii, 1-712.

M.L. Danilevsky

Danilevsky M.L., Kasatkin D.G. & Rubenian A.A. 2005. Revision of the taxonomic structure of the tribe Dorcadionini (Coleoptera, Cerambycidae) on the base of endophallic morphology. - Russian Entomological Journal. 13 (2004): 127-149.

Dejean P.F.M.A. 1821. Catalogue des coléoptères de la collection de M. le Baron Dejean. Paris: Crevot, viii + 136 pp.

Fabricius J.C. 1793. Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adjectis, synonimis, locis, observationibus, descriptionibus. Tomus I. Pars II. Hafniae: C.G. Proft, xx + 538 pp.

Gressitt J.L. 1951. Longicorn beetles of China. In: Lepesme P.: Longicornia, études et notes sur les longicornes, Volume 2. Paris: Paul Lechevalier, 667 pp., 22 pls.

Hua L.-Z. 2002. Cerambycidae (pp. 189-237). - In: List of Chinese Insects, Vol. II. Guangzhou: Zhongshan (Sun Yat-sen) University Press, 612 pp.

Hua L.-Z., Nara H., Saemulson [Samuelson] G.A. & Langafelter [Lingafelter] S.W. 2009. Iconography of Chinese Longicorn Beetles (1406 Species) in Color. Sun Yat-sen University Press, Guangzhou: 474 pp.

ICZN (International Commission on Zoological Nomenclature). 1999. International Code of Zoological Nomenclature. Fourth Edition. Adopted by the International Union of Biological Sciences. The International Trust for Zoological Nomenclature, London, UK. 306 pp.

Jankowski J. 1934. Materials zur Kentniss der Bockäfer Mittelasiens.- Bulletin des Mittelasiens Staatlichen Universität. 19 (16): 95-115. [Янковский И.В. 1934. Материалы к познанию жуков-дровосеков Средней Азии. - Бюллетень Среднеазиатского государственного университета. 19 (16): 95-115]

Jeremías X. & Pérez De Gregorio J.J. 2024. Opsilia malachita (Lucas, 1849) a Catalunya / en Catalogne (Coleoptera, Cerambycidae, Lamiinae). - Revue de l'Association Roussillonnaise d'Entomologie (R.A.R.E.). 33 (112): 191-194.

Karpiński L., Gorring P. & Cognato A.I. 2025. Is Dorcadionini monophyletic? First phylogeny of the genus Eodorcadion reveals startling relationships in Central Asian flightless lamiines (Coleoptera: Cerambycidae). - Zoological Journal of the Linnean Society. 205 (1): 1-14.

Lazarev M.A. 2025. Taxonomic notes on Palaearctic longhorned beetles (Coleoptera, Cerambycidae). Part. 3. - Humanity space. International almanac. 14 (5): 390-402.

LeConte J.L. 1850. An attempt to classify the longicorn Coleoptera of the part of America north of Mexico. - Journal of the Academy of Natural Sciences. (2) 1: 311-340.

Lin M.-Y. [Meiying] & Tavakilian G. 2019. Subfamily Lamiinae Latreille, 1825, pp 216-408. - In: Lin M.-Y. [Meiying] & Yang X.-K. [Xingke] (ed.). Catalogue of Chinese Coleoptera volume 9. Chrysomeloidea: Vesperidae, Disteniidae, Cerambycidae. Beijing: Science Press: i-xii, 575pp.

Lobanov A.L., Danilevsky M.L. & Murzin S.V. 1982. Sistematicheskiy spisok usachei (Coleoptera, Cerambycidae) fauny SSSR. II. - Entomologicheskoe Obozrenie. 62: 252-277.

Löbl I. & Smetana A. (ed.) 2010. Catalogue of Palaearctic Coleoptera, vol. 6.

Chrysomeloidea. Stenstrup, Apollo Books: 924 pp.
Lucas H. 1847. Histoire Naturelle des animaux articulés. Coléoptères. In Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842. Sciences Physiques. Zoologie. II. Deuxième partie. Insectes. (1846): 1-590.
Özdikmen H. 2025. Propositon of a new subgenus of the genus Phytoecia Dejean (Cerambycidae: Lamiinae). - Munis Entomology & Zoology. 20 (1): 1817-1819.
Pic M. 1891. Supplément. Pp. 63-65. - In: Matériaux pour servir à l'étude des longicornes. Premier cahier. Lyon: L. Jacquet, 67 + [1] pp.
Pic M. 1894. Descriptions de coléoptères. - Mémoires de la Société Zoologique de France. 7: 203-207.
Pic M. 1909. Descriptions ou diagnoses et notes diverses (Suite). - L'Échange, Revue Linnéenne. 25: 97-100.
Plavilstshikov N.N. 1932. Zhuki-drovoseki vrediteli drevesiny. Moskva-Leningrad. Gosudarstevennoe Lesnoe Tekhnicheskoe Izdatel'stvo. 200 pp.
Plavilstshikov N.N. 1958. Fauna SSSR. Zhestokrylye. T. XXIII, vyp. 1. Zhuki-drovoseki. Ch. 3. Podsemeistvo Lamiinae, ch. 1. Moskva - Leningrad: Izdatel'stvo Akademii Nauk SSSR, 591 + [1] pp.
Redtenbacher L. 1845. Die Gattungen der deutschen Kaefer-Fauna nach der analytischen Methode bearbeitet, nebst einem kurz gefassten Leitfaden, zum Studium dieses Zweiges der Entomologie. Wien, Carl Ueberreuter, [12] + 177 + [1], 2 pls.
Redtenbacher L. 1849. Fauna Austriaca. Die Käfer. Nach der analytischen Methode bearbeitet. Wien: Carl Gerold, xxvii + 883 pp., 2 pls.
Reitter E. 1911. Uebersicht der mir bekannten Phytoecia-Arten aus der Untergattung Opsilia Muls. aus der palaearctischen Fauna. - Wiener Entomologische Zeitung. 30: 269-271.
Sama G. 2000. Aggiunte e correzioni alla fauna dei Cerambycidae d'Italia (Insecta Coleoptera Cerambycidae). - Quaderno di Studi e Notizie di Storia naturale della Romagna. 11, suppl. (1999): 41-56.
Sama G. 2008. Preliminary note on the cerambycid fauna of North Africa with the description of new taxa (Insecta Coleoptera Cerambycidae). - Quaderno di Studi e Notizie di Storia Naturale della Romagna. 27: 217-245.
Schaller J.G. 1783. Neue Insecten. - Abhandlungen der Hallischen Naturforschenden Gesellschaft. 1: 217-328.
Schrank von Paula F. 1781. Enumeratio insectorum Austriae indigenorum. Augustae Vindelicorum: E. Klett et Franck, [24] + 548 + [4] pp., 4 pls.
Toropov S.A. & Milko D.A. 2013. Longhorns of the tribe Dorcadionini (Coleoptera, Cerambycidae) of Kazakhstan and Middle Asia. Bishkek: 104 pp.
Villiers A. 1946. Faune de l'Empire français. V, Coléoptères cerambycides de l'Afrique du Nord. Paris: Office de la Recherche Scientifique Coloniale, 152 + [1] pp.
Vives E. 2000. Fauna Iberica, Vol 12: Coleoptera, Cerambycidae. Madrid: Museo Nacional de Ciencias Naturales, Consejo Superior de Investigacions Cientificas, 724 pp.
Wang Z.-C. 2014. Monographia of original colored longicorn beetles of China (Basics). Beijing: Scientific and Technical Documentation Press: 1188 pp.

(Vol. 1: 1-593. Vol. 2: 595-1188)

Westwood J.O. 1838. An introduction to the modern classification of insects; founded on the natural habits and corresponding organization of the different families. Vol. II. [Synopsis of the genera of British insects]. Longman, Orme, Brown, Green, and Longmans, London, 1-48.

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New records of Longhorn Beetles (Coleoptera, Cerambycidae) from Peru

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Key words: Coleoptera, Cerambycidae, longhorn beetles, zoogeography, new records, Peru, South America.
Abstract. In this work, 16 species from 13 tribes and 2 subfamilies of Cerambycidae are reported for the first time for Peru (South America).

Introduction

New scientific studies on the Cerambycidae family in South America have been appearing quite frequently recently. This demonstrates that the fauna of many regions remains insufficiently studied. The Peruvian fauna of longhorn beetles is no exception, continuing to surprise with new discoveries for the country. The Cerambycidae family in Peruvian fauna consists of eight subfamilies: Agapanthiinae, Anoplodermatinae, Cerambycinae, Disteniinae, Lamiinae, Lepturinae, Parandrinae, and Prioninae. Peru is striking in its diversity; 1,138 species have currently been recorded for this region (Tavakilian & Chevillotte, 2025). Here we present several new discoveries for Peru.

Material and method

The species identification of the longhorn beetles was performed by the author. Photographs of the beetles were taken using an Olympus SZX7 stereomicroscope with an integrated Olympus SC180 camera. Olympus cellSens Entry 3.1 (Build 21199) software was used. Digital processing of the photographs was performed using Photorom.

[♣] The language of the article has been preserved in the author's version.

Results

Cerambycinae Latreille, 1802
Achrysonini Lacordaire, 1869

Achryson immaculipenne Gounelle, 1909
Fig. 1

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Brazil. Currently, it is known from Argentina, Brazil, Bolivia, Venezuela, Guyana, Colombia, Paraguay and, Ecuador.

Callidiopini Lacordaire, 1868

Curtomerus purus Martins, 1974
Fig. 2

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Bolivia and until now was indicated only for this country.

Cerambycini Latreille, 1804

Sphallotrichus puncticollis (Bates, 1870)

Material examined. Peru, Junin reg., Satipo distr., Satipo, 09.10.2024, D.A. Kuleshov leg.
Remarks. This species was described based from Brazil. Currently, it is known from Bolivia, Brazil, Guyana and Panama. For Peru, the literary source lists its subspecies *S. puncticollis robustus* (Bates, 1872).

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Clytini Mulsant, 1839

Mecometopus hauseri Bezark, Santos-Silva & Galileo, 2016
Fig. 3

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Boliviaand until now was indicated only for this country.

Obriini Mulsant, 1839

Obrium trifasciatum Bosq, 1951

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Argentina. Currently, it is known from Argentina, Bolivia, Brazil, Guyana and Uruguay.

Rhinotragini Thomson, 1861

Ecliptoides pilosipes (Peñaherrera & Tavakilian, 2004)
Fig. 4

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, A.V. Petrov leg.
Remarks. This species was described from Guyana. Currently, it is known from Brazil and Guyana.

Tomopterus grossefoveolatus Zajciw, 1964

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Brazil. Currently, it is known from Brazil, Guyane and Panama.

Tropidini Martins and Galileo, 2007

Compsibidion fairmairei (Thomson, 1865)

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Chile. Currently, it is known from Argentina, Bolivia, Brazil, Paraguay and Uruguay.

Lamiinae Latreille, 1825
Acanthocinini Blanchard, 1845

Nyssodrysternum cingillum Monné, 2009

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 01.10.2024, D.A. Kuleshov leg.
Remarks. This species was described based from Bolivia. Currently, it is known from Bolivia and Guyana.

Sternacutus nyssodroides (Tippmann, 1960)

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described based from Bolivia. Currently, it is known from Bolivia and Ecuador.

Acanthoderini J. Thomson, 1860

Aegomorphus consentaneus (Thomson, 1865)

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 29.09.2024, 07-12.10.2024, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Brazil. Currently, it is known from Bolivia, Brazil and Ecuador.

Dufauxia guaicurana Lane, 1955
Fig. 5

Material examined. Peru, Junin reg., Satipo prov., Puerto Ocopa, 10.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Brazil. Currently, it is known from Bolivia, Brazil and Paraguay.

Agapanthiini Mulsant, 1839

Hippopsis apicalis (Bates, 1866)
Fig. 6

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Brazil. Currently, it is known from Bolivia, Brazil, Guyana and Ecuador.

Calliini Thomson, 1864

Eumimesis decoratus (Fuchs, 1955)
Fig. 7

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 29.09.2024, D.A. Kuleshov leg.
Remarks. This species was described from Bolivia and until now was indicated only for this country.

Desmiphorini Thomson, 1860

Ischnoleomimus arriagadai Galileo & Martins, 2004

Material examined. Peru, Ucayali reg., Atalaya prov., Pitza 02.2024, local collector leg.
Remarks. This species was described from Paraguay and until now was indicated only for this country.

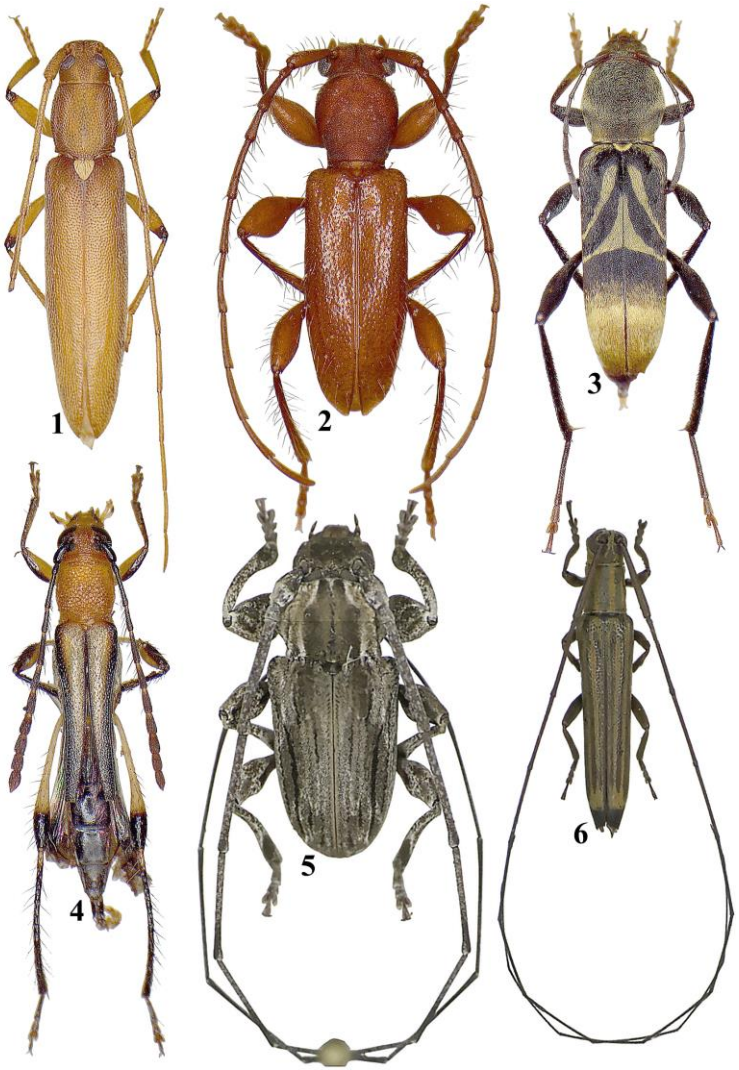

Fig. 1. *Achryson immaculipenne* Gounelle, 1909: male, Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg. **Fig. 2.** *Curtomerus purus* Martins, 1974: male, Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg. **Fig. 3.** *Mecometopus hauseri* Bezark, Santos-Silva & Galileo, 2016: female, Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg. **Fig. 4.** *Ecliptoides pilosipes* (Peñaherrera & Tavakilian, 2004): female, Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, A.V. Petrov leg. **Fig. 5.** male, Peru, Junin reg., Satipo prov., Puerto Ocopa, 10.10.2024, D.A. Kuleshov leg. **Fig. 6.** *Hippopsis apicalis* (Bates, 1866): male, Peru, Junin reg., Satipo prov., Rio Venado, 14-16.10.2024, D.A. Kuleshov leg.

Onciderini Thomson, 1860

Tulcus fulvofasciatus (Dillon & Dillon, 1945)

Material examined. Peru, Junin reg., Satipo prov., Rio Venado, 07-12.10.2024, D.A. Kuleshov leg.
Remarks. This species was described from Colombia. Currently, it is known from Colombia, Costa Rica and Panama.

Fig. 7. *Eumimesis decoratus* (Fuchs, 1955): male, Peru, Junin reg., Satipo prov., Rio Venado, 29.09.2024, D.A. Kuleshov leg.

Conclusion

Even in regions where extensive collections have been conducted in the past, previously uncollected species are often encountered. Based on a study of Cerambycidae materials stored in the author's collection, new data are presented on 16 species of longhorn beetles from Peru.

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REFERENCES

Aguilar C., Cubilla F., Avila-Torres I. & Garcete-Barrett B. 2024. Two new records of Cerambycinae (Coleoptera: Cerambycidae) from Peru. - Acta Zoológica Lilloana. 68 (1): 59-67.

Audureau A. 2012. Notes sur les Onciderini du Pérou (Coleoptera, Cerambycidae, Lamiinae, Onciderini). - Les Cahiers Magellanes (NS). 9: 57-64.

Audureau A. 2016. Notes sur les Apomecynini du Pérou (Coleoptera, Cerambycidae, Lamiinae). Les Cahiers Magellanes (NS). 23: 60-68.

Audureau A. & Demez P. 2015. Nouvelles especes d Acanthocinini neotropicaux originaires du Perou. - Les Cahiers Magellanes (NS). 18: 19-26.

Demez P. & Touroult J. 2011. Contribution a la connaissance des longicornes du Perou I 59 nouveaux signalements pour le pays (Coleoptera, Cerambycidae). - Les Cahiers Magellanes (NS). 6: 97-108.

Galileo M., Martins U., Le Tirant S. & Santos-Silva A. 2014. Five new species of Cerambycidae (Coleoptera) from Peru and Bolivia and two new records for Peru. - Insecta Mundi .0376: 1-13.

Juárez-Noé G. 2025. New records of Cerambycidae (Insecta, Coleoptera) from Peru. - Boletín del Museo Nacional de Historia Natural del Paraguay. 29 (Art. e2025007): 11 pp.

Juárez-Noé G. & Fagerstrom C. 2024. An annotated and illustrated catalog of the Peruvian specimens of Cerambycidae (Coleoptera) housed in the Biological Museum at Lund University, Sweden. - Zootaxa. 5514 (4): 368-384.

Monne M. & Chaboo C. 2015. Beetles (Coleoptera) of Peru: A Survey of the Families. Cerambycidae, Disteniidae, Vesperidae. - Journal of the Kansas Entomological Society. 88 (1): 34-120.

Monné M., Nearns E., Carril S., Swift I. & Monne M. 2012. Preliminary checklist of the Cerambycidae, Disteniidae, and Vesperidae (Coleoptera) of Peru. - Insecta Mundi. 0213: 1-48.

Tavakilian G. (Systematics) & Chevillotte H. (Webmaster) 2025. Titan database about Longhorns or Timber-Beetles (Cerambycidae). - URL: http://titan.gbif.fr/accueil_uk.html (date of access 12.10.2025)

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Taxonomic notes on Palaearctic longhorned beetles (Coleoptera, Cerambycidae). Part. 4

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Key words: Coleoptera, Cerambycidae, taxonomy, zoogeography, new synonym, new combination, new subspecies

Abstract. New localities of 5 species are proposed. Not available 10 synonyms of *Pachytodes erraticus* (Dalman, 1817) used as available by Danilevsky (2020) must be regarded as unavailable. An aberrant *Stenurella* (s.str.) *melanura* is shown. *Trichoferus* Wollaston, 1854 = *Trichoformafascius* Özdikmen, 2025a, **syn. nov.** *Bulbocerambyx gui* (Lin, Miroshnikov & He, 2025), **comb. n**., *B. miaobenfui* (Lin, Miroshnikov & He, 2025), **comb. n.,** *B. liyuani* (Lin, Miroshnikov & He, 2025), **comb. n.** *Obrium cantharinum* (Linnaeus, 1767) from Russian Far East can be *O. c. shimomurai* Takakuwa, 1984. Özdikmen (2025b) proposed 4 unacceptable modifications in Anaglyptini. *Pogonocherus* (*Trichorondonia* Breuning, 1965 = *Prominensipenna* Özdikmen, 2025c, **syn. nov.**). *Agapanthia* (*Epoptes*) *dahli olegpaki* **ssp. n.** is described from Kazakhstan (Tarbagatai).

Introduction

A series of 3 articles (2024a, 2024b, 2025) with taxonomy remarks on Palaearctic Cerambycidae are followed with 13 new notes.

Results

1. One female of *Brachyta* (s. str.) *interrogationis* (Linnaeus, 1758) (Fig. 1) was collected in Southern Kazakhstan: Karatau Ridge (10 km SE Karaoi vill., 43°13′58″N, 70°11′16″E, 700 m, 14.5.2025, O. Pak leg.), is preserved in the collection of M.A. Lazarev (Moscow, Russia). The taxon is preliminary identified here as *B.* (s. str.) *i. duodecimmaculata* (Fabricius, 1781).

2. Two series of *Brachyta* (s. str.) *interrogationis miroshnikovi* Lazarev, 2011 (Figs 2-3) from Caucasus are preserved in the collection of V.E. Ustinov (Moscow, Russia): 2 males, Russia, Karachay-Cherkessia, Daut, 10.7.1994; 3 males, Russia, Dagestan, Buynaksk District, Verkhny Kazalin, 10.7.2004, V. Sofronov. It is the first record of the taxon for Dagestan.

3. Most of the synonyms of *Pachytodes erraticus* (Dalman, 1817) have been published by M. Pic as variations, but often different variations were published from one locality. All such names are unavailable.

The position of many synonyms needs verification.

erraticus erraticus Dalman, 1817a: 490 (*Leptura*) **E**: AL BH CT CZ GE KZ MC ME PL RO SB SK SL SP ST ?SZ UK **A**: ES KZ WS XIN

heyrovskyi Pic, 1924c: 26 (*Leptura*) ["Bohême"]
russicus Pic, 1898h: 54 ["Russie"]

erraticus erythrurus Küster, 1848b: 90 ["Türkei"] (*Pachyta*) **E**: AL BH BU CR FR GE GR HU IT KZ MC MD ME RO SB SL SP ST ?SZ TR UK **A**: AB AR GG IN KZ SY TR

akbesianus Pic, 1898a: 6 ["Syrie, à Akbès"] - not available name
anticedivisus Pic, 1914c: 14 (*Leptura*) ["Caucase: Arax; Brousse"]
anticenotatus Pic, 1914c: 13 (*Leptura*) ["Veluchi, Sarepta, Eibes"] - not available name
atroapicalis Pic, 1913b: 186 ["monts Amanus, en Syrie"] - not available name
eibesanus Pic, 1914c: 13 (*Leptura*) ["Syrie: Eibes"] - not available name
hungaricus Pic, 1913b: 186 (*Leptura*) ["Hongrie"]
italicus Pic, 1916b: 4 ["Lombardie"]
kalavritanus Pic, 1913b: 186 (*Leptura*) ["Morée"]
ragusai Pic, 1923d: 3 ["Sicile"] - not available name
rosinae Pic, 1901b: 11 (*Leptura*) ["Anatolie: Ak-Chehir"]
rufoapicalis Pic, 1913b: 186 (*Leptura*) ["monts Amanus, en Syrie"] - not available name
rufonotatus Pic, 1913b: 186 (*Leptura*) ["monts Amanus, en Syrie"] - not available name
quinquepunctatus Pic, 1915g: 18 (*Leptura*) ["Südosteuropa u. Kleinasien" by Reitter, 1912]
septemsignatus Küster, 1848b: 89 (*Pachyta*) ["südlichen Türkei"]
siculus Pic, 1916b: 4 ["Sicile"] - not available name
subapicalis Pic, 1914c: 15 (*Leptura*) ["Akbès"] - not available name
testaceofasciatus Pic, 1913b: 186 (*Leptura*) ["Turquie et Syrie"] - not available name
unijunctus Pic, 1914c: 14 (*Leptura*) ["Syrie: Eibes"] - not available name

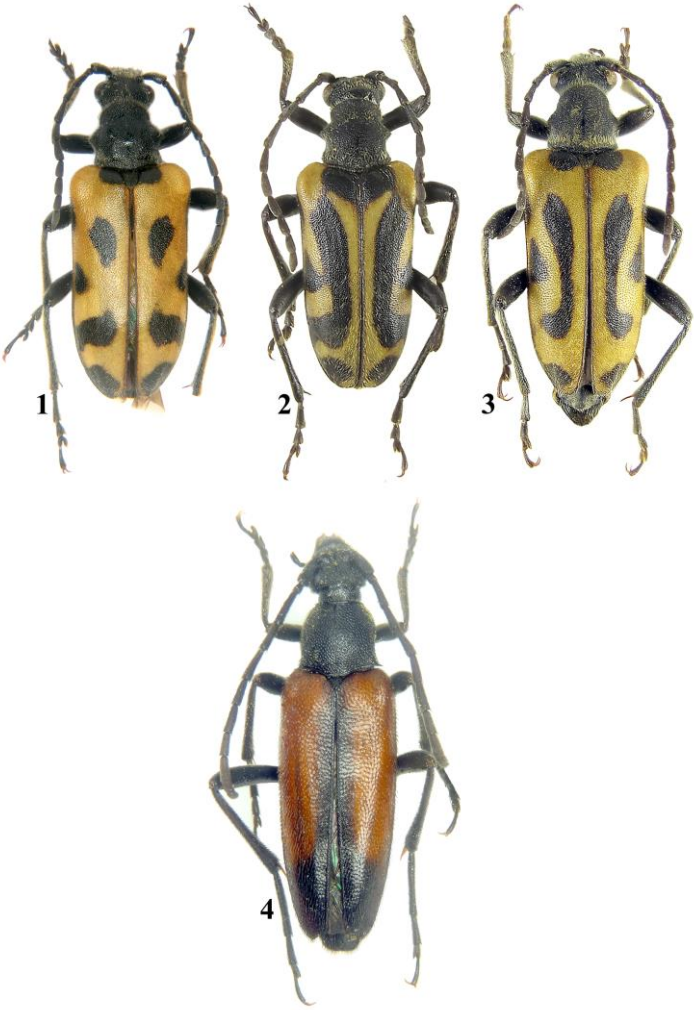


Fig. 1. *Brachyta interrogationis duodecimmaculata* (Fabricius, 1781): female, Southern Kazakhstan: Karatau Ridge, 10 km SE Karaoi vill., 43°13′58″N, 70°11′16″E, 700 m, 14.5.2025, O. Pak leg..
Figs 2-3. *Brachyta interrogationis miroshnikovi* Lazarev, 2011: 2. male, Russia, Karachay-Cherkessia, Daut, 10.7.1994; 3. Male, Russia, Dagestan, Buynaksk District, Verkhny Kazalin, 10.7.2004, V. Sofronov.
Fig. 4. *Stenurella* (s.str.) *melanura melanura* (Linnaeus, 1758): female, Russia, Bashkiria, South-Urals Natural Reserve, 22.7.2018, A.B. Ryvkin.

4. An aberrant *Stenurella* (s.str.) *melanura melanura* (Linnaeus, 1758) female (Fig. 4) (Russia, Bashkiria, South-Urals Natural Reserve, 22.7.2018, A.B. Ryvkin) with prothorax unusually widened in the middle is preserved in the collection of V.E. Ustinov (Moscow, Russia).

5. *Trichoformafascius* Özdikmen, 2025a (type species *Callidium pallidum* Olivier, 1790) was proposed as a subgenus of *Trichoferus* Wollaston, 1854 for 2 species with peculiar elytral design - *T. pallidus* (Olivier, 1790) and *T. lunatus* (Szallies, 1994). But first, these species are not related, and second, such separation does not exhaust the diversity of the genus. So, at the moment *Trichoferus* Wollaston, 1854 = *Trichoformafascius* Özdikmen, 2025a, **syn. nov.**

6. All 3 new species described as *Neocerambyx* J. Thomson, 1861 by Lin, Miroshnikov & He (2025) belong in fact to *Bulbocerambyx* Lazarev, 2019 because of strongly swollen 3rd and 4th antennal joints in males, absence of lateral thoracic tubercles, relatively short 4th antennal joint, which is about equal in length to 3rd joint or just a little longer: *Bulbocerambyx gui* (Lin, Miroshnikov & He, 2025), **comb. n.**, *B. miaobenfui* (Lin, Miroshnikov & He, 2025), **comb. n.,** *B. liyuani* (Lin, Miroshnikov & He, 2025), **comb. n.**

7. According to Niisato (2007), populations of *Obrium cantharinum* (Linnaeus, 1767) are presumably represented in Russian Far East by Japanese subspecies *O. c. shimomurai* Takakuwa, 1984 (Hokkaido).

8. *Nathrius brevipennis* (Mulsant, 1839) was collected in Jordan (Aqaba gov., Wadi Rum, 989 m, 29°35′00.8″N. 35°24′57.7″E, [ex., *Ficus* sp., emerged 5.6.2024], 6.5.2024, R. Ambrus leg. is preserved in the collection of M.A. Lazarev (Moscow, Russia).

9. Özdikmen (2025b) proposed 4 unacceptable modifications: *Aglaophis* J. Thomson, 1857 was accepted by him as a genus name - in fact: *Anaglyptus* (*Aglaophis*).

He accepted *Aglaophis* (*Epodus* Chevrolat, 1863) and *Aglaophis* (*Metaglaophis* K. Ohbayashi, 1960); in fact: *Anaglyptus* (*Aglaophis* J. Thomson, 1857 = *Metaglaophis* K. Ohbayashi, 1960 =

Epodus Chevrolat, 1863).

Akajimatora Kusama & Takakuwa, 1984 was accepted (Özdikmen, 2025b) as a genus: in fact: *Anaglyptus* (*Akajimatora*).

10. A male of *Clytus arietis* (Linnaeus, 1758) with the label: "Cyprus, Pafos, Coral Bay, 15.5.2016, S.I. Khvylya" is preserved in the collection of M.A. Lazarev (Moscow, Russia).

11. A female of *Clytus arietis* (Linnaeus, 1758) with 2 labels: 1) "Tunisia, Jendouba prov., Jebel Feidia Mts., 15 km NW Ghardimaou, 24.5.2007, Walter Grosser leg."; 2) "ex larva, Quercus, 18.4.2008" is preserved in the collection W. Grosser (Opava, Czech Republic).

12. *Prominensipenna* Özdikmen, 2025c with type species *Trichorondonia kabateki* Viktora, 2024 was described as a subgenus of *Trichorondonia* Breuning, 1965. But *Trichorondonia hybolasioides* Breuning, 1965 - the type species of *Trichorondonia* Breuning, 1965 does not differ considerably from *T. kabateki* Viktora, 2024, so, *Pogonocherus* (*Trichorondonia* Breuning, 1965 = *Prominensipenna* Özdikmen, 2025c, **syn. nov.**).

13. ***Agapanthia* (*Epoptes*) *dahli olegpaki* ssp. n.** (Figs 5-6)

Type locality. Kazakhstan, N slope of Tarbagatai Mt., Maylyshat env., 47°47′20″N, 81°44′49″E.

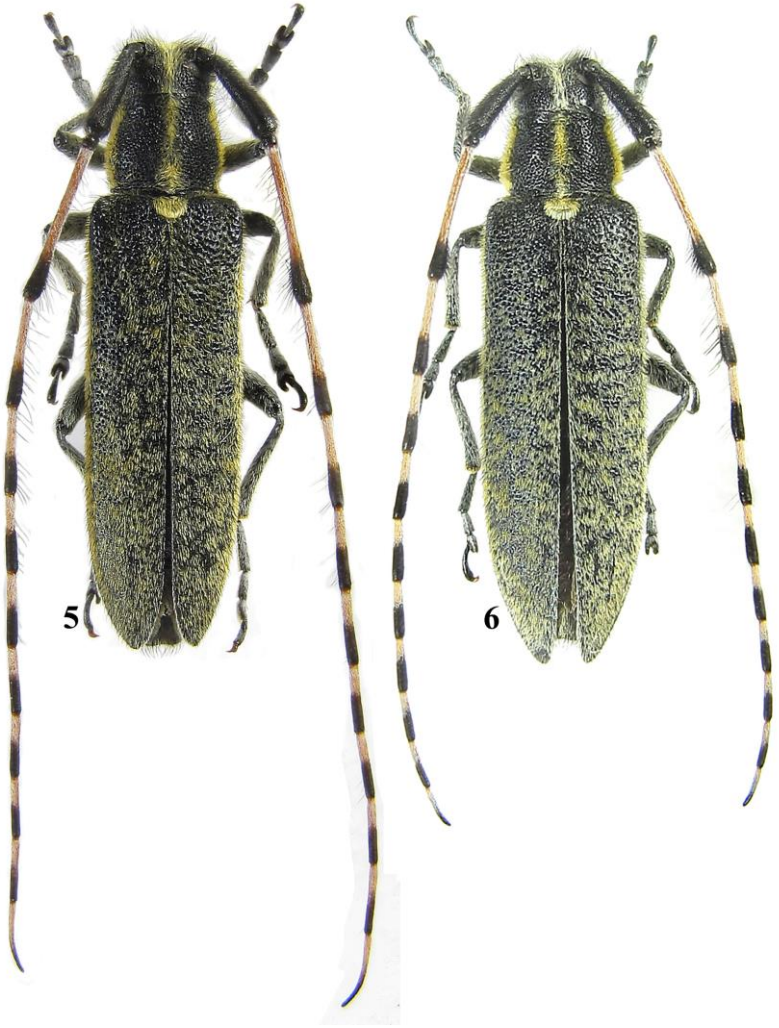
The new subspecies is very close to *A.* (*E.*) *d. calculensis* Lazarev, 2013 which is distributed far northwards near Ust-Kamenogorsk (*Agapanthia dahli dahli* group of species). It is characterized by: relatively thin antenna, male antennae much longer than body, surpassing elytral apices with 6 joints, in females - with 4 joints; setae tuft of 3rd antennal joint well developed; 4th antennal joint with reduced setae tuft; black part of 3rd antennal joint very short, occupies about 1/5 of its length; elytral pubescence with hardly visible, scattered setae patches; humeral elytral area with same pubescence as dorsal elytral side; body length in male: 13.8 mm, width: 3.4 mm; body length in female: 14.3 mm, width: 3.6 mm.

Type material. Holotype (Fig. 5), male, Kazakhstan, N slope of

Tarbagatai Mt., Maylyshat env., 47°47′20″N, 81°44′49″E, 10.6.2025, O. Pak leg. is preserved in the collection of M.A. Lazarev (Moscow, Russia); Paratype, 1 female (Fig. 6), with the same label is preserved in the collection of M.A. Lazarev (Moscow, Russia).

Etymology. The new taxon is dedicated to my close friend Oleg Pak (Donetsk-city), who collected the type series.

Acknowledgment. I am very grateful to my good friends Richard Ambrus (Praha), Oleg Pak (Donetsk-city) and Vadim Ustinov (Moscow) for providing me with the specimens for study. I would like to express my sincere gratitude to Walter Grosser (Opava) for his assistance.



Figs 5-6. *Agapanthia* (*Epoptes*) *dahli olegpaki* **ssp. n.**: 5. Holotype, male; 6. Paratype, female.

REFERENCES

Lazarev M.A. 2024a. Taxonomic notes on longhorned beetles with the descriptions of several new taxa (Coleoptera, Cerambycidae). - Humanity space. International almanac. 13 (1): 21-38. DOI: 10.24412/2226-0773-2024-13-1-21-38.

Lazarev M.A. 2024b. Taxonomic notes on longhorned beetles with the descriptions of several new taxa (Coleoptera, Cerambycidae). Part 2. - Humanity space. International almanac. 13 (8): 712-718. DOI: 10.24412/2226-0773-2024-13-8-712-718.

Lazarev M.A. 2025. Taxonomic notes on Palaearctic longhorned beetles (Coleoptera, Cerambycidae). Part. 3. - Humanity space. International almanac. 14 (5): 390-402. DOI: 10.24412/2226-0773-2025-14-5-390-402.

Lin M-Y, Miroshnikov A., He L. 2025. Contribution to the knowledge of the longicorn beetle genus Neocerambyx (Coleoptera, Cerambycidae, Cerambycinae, Cerambycini) from China, with descriptions of three new species. - ZooKeys. 1247: 45-61. DOI: 10.3897/zookeys.1247.153858

Niisato T. 2007. Cerambycinae. Pp. 252-281, 424-512. - In: Ohbayashi N. & Niisato T. (eds). Longicorn beetles of Japan. Kanagawa: Tokai University Press, i-vii + 820 pp.

Özdikmen, H. 2025a. Proposition of a new subgenus of the genus Trichoferus Wollaston (Cerambycidae: Cerambycinae). - Munis Entomology & Zoology. 20 (supplement): 4142-4151.

Özdikmen H. 2025b. Proposition of three new subgenera of the genus Anaglyptus Mulsant (Cerambycidae: Cerambycinae). - Munis Entomology & Zoology. 20 (2): 2682-2709.

Özdikmen, H. 2025c. Proposition of a new subgenus of the genus Trichorondonia Breuning, 1965 (Cerambycidae: Lamiinae: Acanthocinini). - Munis Entomology & Zoology. 20 (supplement): 4078-4083.

Takakuwa M. 1984: [new taxa]. - In: Kusama K & Takakuwa M.: Parandrinae. Prioninae. Spondylinae. Aseminae. Lepturinae (part). Cerambycinae. Lamiinae (part). The longicorn-beetles of Japan in color. Tokyo: Kodansha. 549 pp.

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Purpuricenus wachanrui schoenfeldti Heyden, 1890 (Coleoptera: Cerambycidae) from Iran is a valid name

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Key words: Coleoptera, Cerambycidae, taxonomy, new synonym, Iran.
Abstract. *Purpuricenus wachanrui schoenfeldti* Heyden, 1890, **nom. rest.** = *Purpuricenus robusticollis* Pic, 1905, **syn. n.**

The taxon was originally described as a variation *Purpuricenus wachanrui* var. *schoenfeldti* Heyden, 1890. Later it was generally (Aurivillius, 1912; Winkler, 1929; Plavilstshikov, 1940, Özdikmen, 2025) accepted as an aberration of *P. wachanrui* Levrat, 1858. Recently the name was often published (Löbl & Smetana, 2010; Miroshnikov, 2012; Danilevsky, 2020; Özdikmen, 2021) as a synonym of *P. wachanrui*.

Purpuricenus robusticollis Pic, 1905 was originally described as a species and was so accepted (Aurivillius, 1912; Winkler, 1929; Löbl & Smetana, 2010; Ambrus & Grosser, 2013; Danilevsky, 2020).

Danilevsky & Hodek (2024) downgraded the name to subspecies rank *P. wachanrui robusticollis* Pic, 1905.

Now we received a photo of the holotype (female) of *P. wachanrui* var. *schoenfeldti* Heyden, 1890 (Figs 1-2) designatев as lectotype by G. Sama, but never published. It is preserved in Senckenberg Deutsches Entomologisches Institut, Müncheberg. It is really totally black and about 15 mm long.

Photo of the holotype (male) of *Purpuricenus robusticollis* Pic, 1905 (Figs 3-5) from National Museum of Natural History, Paris

is also available. The both specimens are clearly conspecific. A remarkable character of the holotype of *P. wachanrui* var. *schoenfeldti* Heyden - small red spot on the curved elytral margin, mentioned in its original description is clearly seen in the holotype of *Purpuricenus robusticollis* Pic.

So, *Purpuricenus wachanrui schoenfeldti* Heyden, 1890, **nom. rest.** = *Purpuricenus robusticollis* Pic, 1905, **syn. n.**

The study of big series of the taxon from different localities (Danilevsky & Hodek, 2024) shows a great degree of its variability. Pronotum sometimes can be partly or totally red and elytra can have wide red transverse band or a pair of red spots.

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REFERENCES

Ambrus R. & Grosser W. 2013. Results of the Czech entomological expedition to Iran (2009-2010) (Coleoptera: Cerambycidae). - Humanity space. International almanac. 2 (3): 461-482.

Aurivillius C. 1912. Cerambycidae: Cerambycinae. Pars 39. - In: Schenkling S. (ed.): Coleopterorum Catalogus. Volumen 22. Cerambycidae I. Berlin: Junk, 108 + 574 pp.

Danilevsky M.L. & Hodek K. 2024. A complex of taxa around Purpuricenus wachanrui Levrat, 1858 (Coleoptera, Cerambycidae). - Humanity space. International almanac. 13 (8): 662-687. DOI: 10.24412/2226-0773-2024-13-8-662-687.

Heyden L.F.J.D. von 1890. Purpuricenus wachanrui Levrat und seine Varietäten. Deutsche Entomologische Zeitschrift 1890: 79.

Löbl I. & Smetana A. (ed.) 2010. Catalogue of Palaearctic Coleoptera, vol. 6. Chrysomeloidea. Stenstrup, Apollo Books: 924 pp.

Miroshnikov A. I. 2012. Contribution to the knowledge of the longicorn beetles of the Caucasus. 8. Genus Purpuricenus Dejean, 1821 (Coleoptera: Cerambycidae). Caucasian entomological bulletin. 8 (1): 37-50.

Özdikmen, H. 2025. A taxonomic evaluation on the genus Purpuricenus Deje- an with proposition of a new subgenus (Cerambycidae: Cerambycinae). Munis Entomology & Zoology. 20 (2): 2777-2798.

Özdikmen, H. 2021. An annotated catalogue: Cerambycoidea (Cerambycidae and Vesperidae) of Turkey (Coleoptera). Munis Entomology & Zoology. 16 (Supplement): 1273-1556.

Pic M. 1905. Descriptions et Notes Diverses. - Matériaux pour servir à l'étude des Longicornes. 5 (2): 5-15.

Pic M. 1956. Coléoptères du globe (suite). - L'Échange, Revue Linnéenne. 72 (543): 1-4.

Plavilstshikov N.N. 1940. Fauna SSSR. Nasekomye zhestokrylye. T. XXII. Zhukidrovoseki (ch. 2). Moskva - Leningrad: Izdatel'stvo Akademii Nauk SSSR, 784 + [3] pp. [in Russian]

Winkler A. 1929. Cerambycidae. - In: Catalogus Coleopterorum regionis palaearcticae. Winkler et Wagner, Wien, pp. 1135-1226.

Figs 1-2. *Purpuricenus wachanrui schoenfeldti* Heyden, 1890, **nom. rest.** (Photos by Momo Larisch): 1. Holotype, female; 2. Labels of the holotype.

Figs 3-5. *Purpuricenus robusticollis* Pic, 1905 (Photos by Dr. Gérard Tavakilian): 3. Holotype, male, dorsal view; 4. Holotype, male, lateral view; 5. Labels of the holotypes.

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